

Amendments to the Specification

On page 24, the 2nd paragraph, beginning at line 5, is amended to read as follows:

FIG. 2 is a flow chart illustrating an exemplary method 200 for enhancing knowledge that may be discovered from data using a specific type of learning machine known as a support vector machine (SVM). A SVM implements a specialized algorithm for providing generalization when estimating a multi-dimensional function from a limited collection of data. A SVM may be particularly useful in solving dependency estimation problems. More specifically, a SVM may be used accurately in estimating indicator functions (e.g. pattern recognition problems) and real-valued functions (e.g. function approximation problems, regression estimation problems, density estimation problems, and solving inverse problems). The SVM was originally developed by Boser, Guyon and Vladimir N. Vapnik ("A training algorithm for optimal margin classifiers", *Fifth Annual Workshop on Computational Learning Theory*, Pittsburgh, ACM (1992) pp. 142-152). The concepts underlying the SVM are also explained in detail in his Vapnik's book, entitled *Statistical ~~Learning~~ Learning Theory* (John Wiley & Sons, Inc. 1998), which is herein incorporated by reference in its entirety. Accordingly, a familiarity with SVMs and the terminology used therewith are presumed throughout this specification.

On page 28, the 2nd paragraph, beginning on line 20, is amended as follows:

The optimal categorization method 300 takes advantage of dynamic programming techniques. As is known in the art, dynamic programming techniques may be used to significantly improve the efficiency of solving certain complex problems through carefully structuring an algorithm to reduce redundant calculations. In the optimal categorization problem, the straightforward approach of exhaustively searching through all possible cuts in the continuous variable data would result in an algorithm of exponential complexity and would render the problem intractable for even moderate sized inputs. By taking advantage of the additive property of the target function, in this problem the average entropy, the problem may be divide divided into a series of sub-problems. By properly formulating algorithmic sub-structures for solving each sub-problem and storing the solutions of the sub-problems, a significant amount of redundant computation may be identified and avoided. As a result of using the dynamic

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programming approach, the exemplary optimal categorization method 300 may be implemented as an algorithm having a polynomial complexity, which may be used to solve large sized problems.